

MEDICAL TERMINOLOGY

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BLOOD & LYMPHATIC SYSTEM



Constructed medical terms:

Many medical terms are 'constructed' from a combination of word parts... prefixes, Greek or Roman root words, and suffixes. Determine the meaning of the whole word by first deciphering the meaning of the suffix, then the prefix, and finally the root word. Then combine the 3 parts.

MICRO / SCOP / IC

Prefix meaning 'small' / root word meaning 'viewing instrument' / suffix meaning 'pertaining to'

When you start with a root word and add a suffix that starts with a consonant OR another root word, then you have to connect the two word parts with a vowel. This is called a 'combining vowel', and is usually an 'o, i, or e'.

HEM / O / PHILIA

Root word meaning 'blood' / combining vowel / suffix meaning 'love of'

Nonconstructed medical terms:

If a medical term is not constructed from a combination of word parts, then it is called 'nonconstructed'. These are words derived from other languages, words derived from names of people, from initials that form acronyms, or from abbreviations. To learn the meanings of nonconstructed terms, you must simply commit them to memory.



The term 'pasteurize' refers to the process of heating milk to a temperature that kills harmful microorganisms. The term is derived from the name of its inventor... Louis Pasteur (1822-1895).

Medical root words of the blood and lymphatic system...

ROOT WORD	DEFINITION
ERYTHR	RED
FUSION	MERGER OR BLENDING
GLOBIN	PROTEIN
HEM or HEMAT	BLOOD
IMMUN	EXEMPT OR IMMUNITY
LEUK	WHITE
LYMPH	CLEAR WATER OR FLUID
NECR	DEATH
NUCLE	KERNEL OR NUCLEUS
PHYLAXIS	PROTECTION
SEPT	PUTREFYING; WALL
THROMB	CLOT
TOX	POISON

Medical prefixes for the blood and lymphatic system...

PREFIX	DEFINITION
AN-	WITHOUT OR ABSENCE OF
ANA-	UP OR TOWARD
ANTI-	AGAINST OR OPPOSITE OF
MAL-	BAD
MONO-	ONE
TRANS-	ACROSS

Medical suffixes for the blood and lymphatic system...

SUFFIX	DEFINITION
-EMIA	CONDITION OF BLOOD
-IA	CONDITION OF
-IC	PERTAINING TO
-LYSIS	LOOSEN OR DISSOLVE
-OLOGY	STUDY OR SCIENCE OF
-OMA	TUMOR
-OSIS	CONDITION OF
-PATHY	DISEASE
-PENIA	ABNORMAL REDUCTION IN NUMBER OR DEFICIENCY
-PHILIA	LOVING , LOVE OF, OR AFFINITY FOR
-RRHAGE	PROFUSE BLEEDING; HEMORRHAGE

Medical terms, signs, & symptoms of the blood and lymphatic system...

Hematology

(HEE mah TALL oh jee)

The general field of medicine focusing on blood-related disease.

A physician specializing in blood diseases is called a hematologist (HEE mah TALL oh jist)

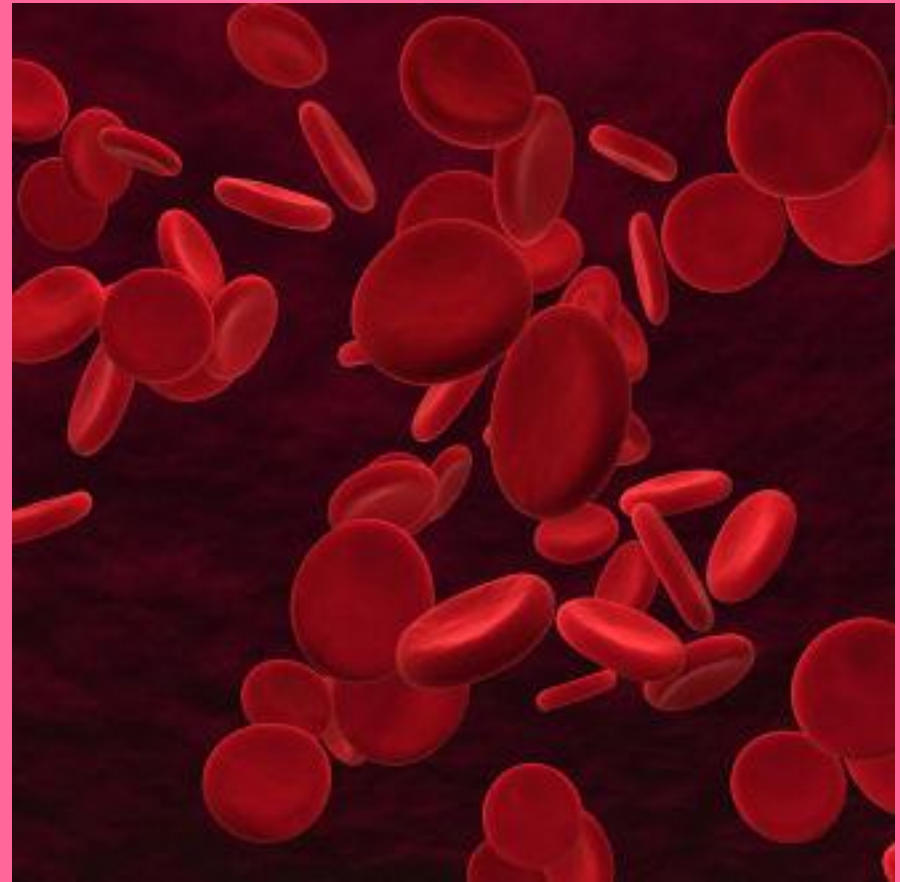


Medical terms, signs, & symptoms of the blood and lymphatic system...

Erythropenia

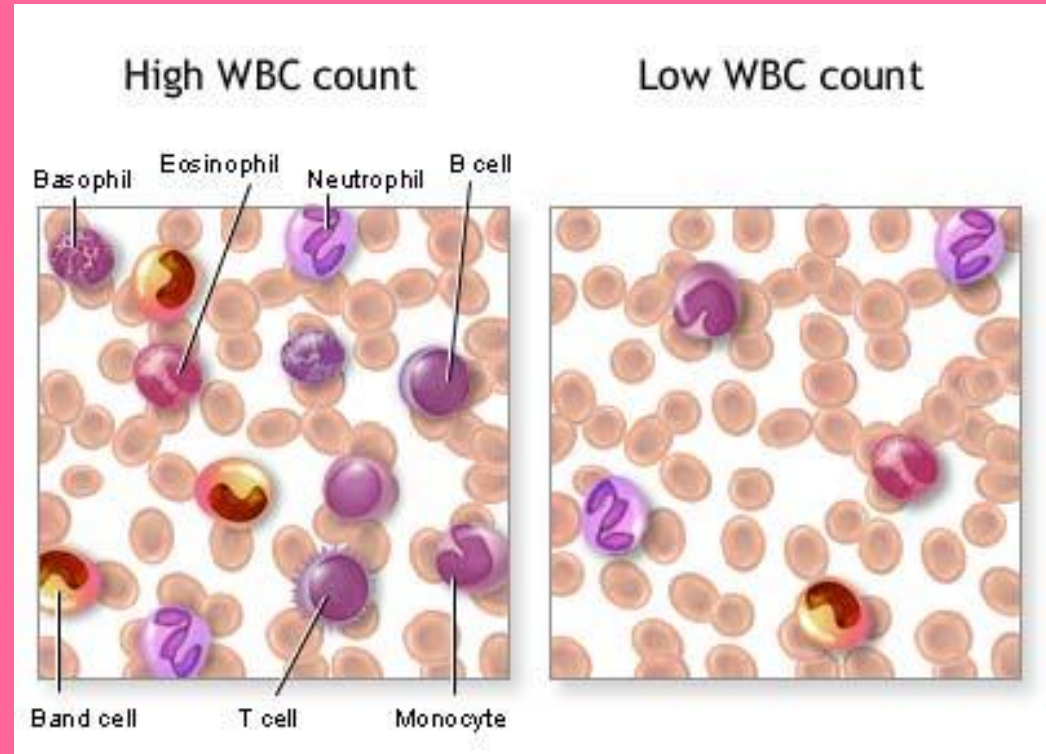
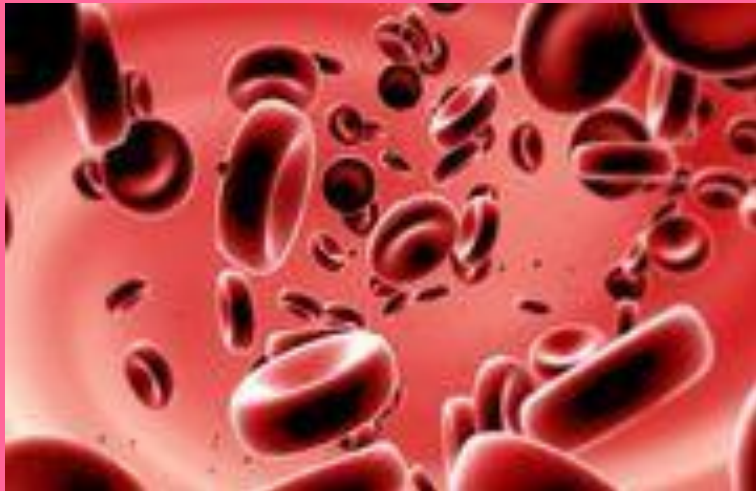
(ee RITH roh PEE nee ah)

**Abnormally
reduced number
of red blood cells
in a blood sample.**



Medical terms, signs, & symptoms of the blood and lymphatic system...

Leukopenia (loo koh PEE nee ah)



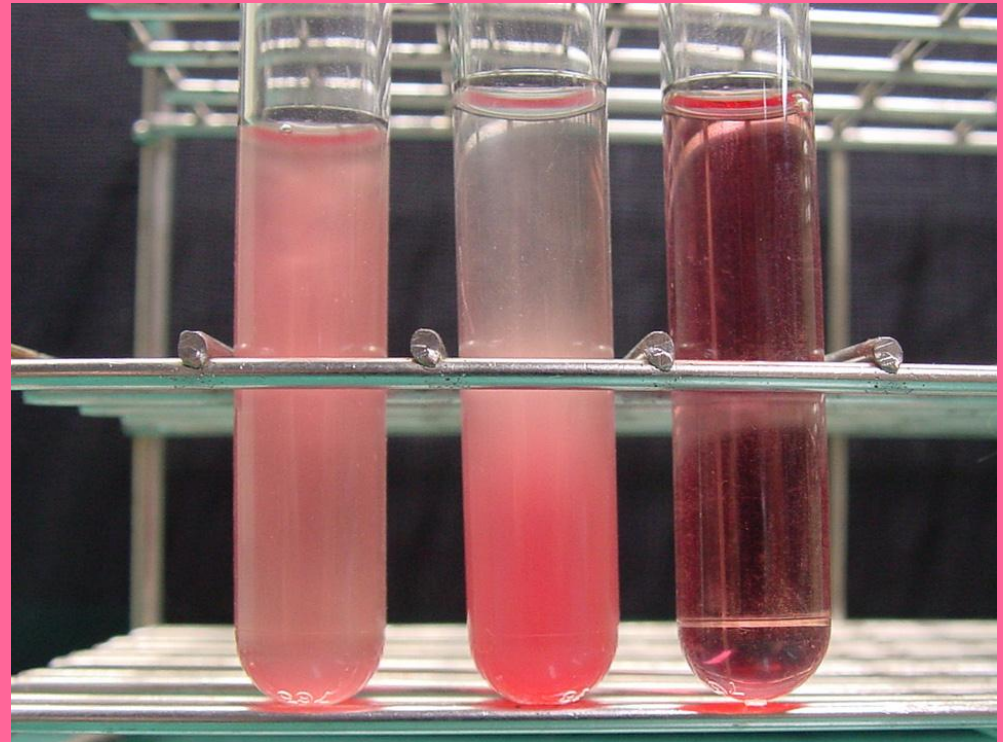
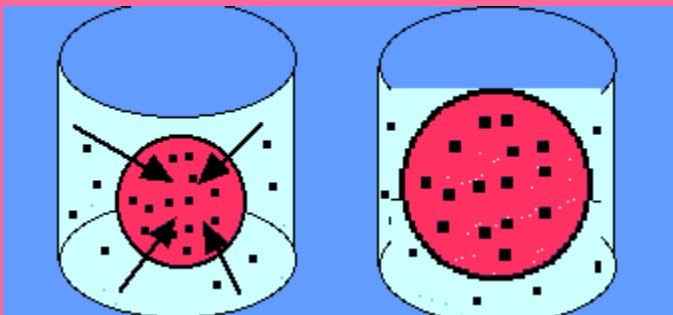
Abnormally reduced number of white blood cells in a blood sample.

Medical terms, signs, & symptoms of the blood and lymphatic system...

Hemolysis

(hee MALL ih siss)

The rupture of red blood cells that may occur if a blood transfusion is not compatible with the recipient's blood.



No hemolysis No hemolysis Hemolysis

Mismatched blood penetrates the red blood cells, causing them to enlarge and possibly burst.

Medical terms, signs, & symptoms of the blood and lymphatic system...

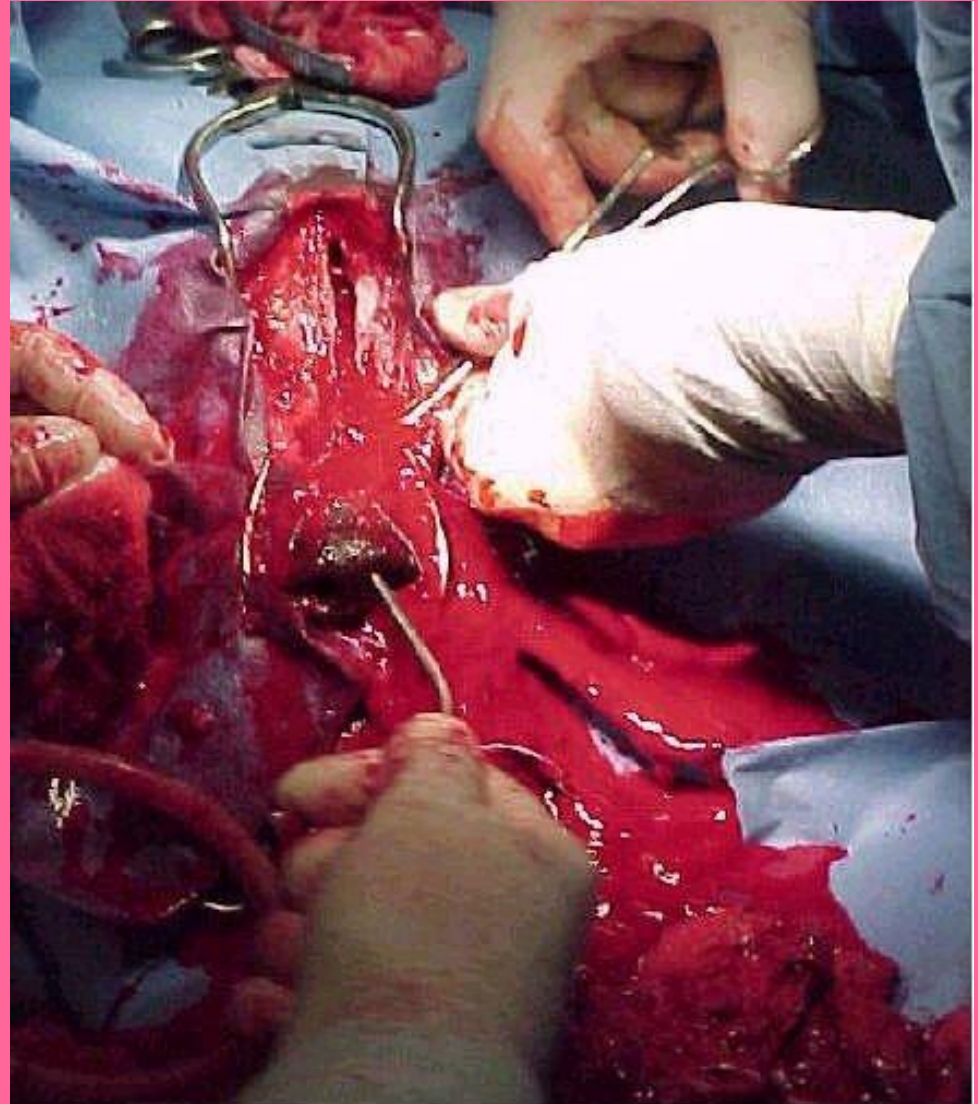
Hemorrhage

(HEM eh ri hj)

**Abnormal loss of
blood, usually a sign
of trauma or illness.**



Conjunctival hemorrhage



Diseases and disorders of the blood and lymphatic system...

Anaphylaxis

(AN ah fih LAK siss)

A life threatening, immediate reaction to a foreign substance.



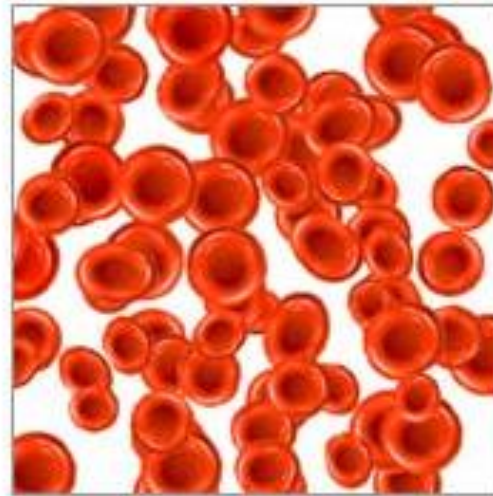
Diseases and disorders of the blood and lymphatic system...

Anemia

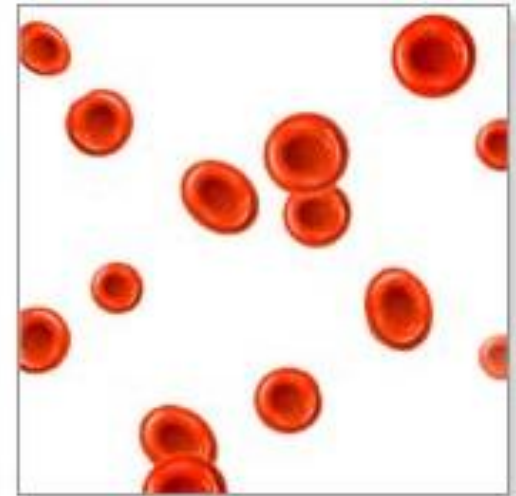
(ah NEE mee ah)

Prefix an- means without; Suffix – emia means condition of blood.

Normal amount of red blood cells



Anemic amount of red blood cells



Anemia is characterized by a reduced number of red blood cells or their ability to carry oxygen.

Diseases and disorders of the blood and lymphatic system...

Dyscrasia

(diss KRAY zee ah)

This is a nonconstructed term, derived from the Greek word meaning 'difficult temperament'. It refers to any abnormal condition of the blood.



Diseases and disorders of the blood and lymphatic system...

Edema

(eh DEE mah)

This is a nonconstructed term, derived from the Greek word *oidema* meaning 'swelling'.



Edema occurs when there is leakage of fluid from the bloodstream into the interstitial (enter STISH ul) space between body cells.

Diseases and disorders of the blood and lymphatic system...

Hematoma

(HEE mah TOH mah)

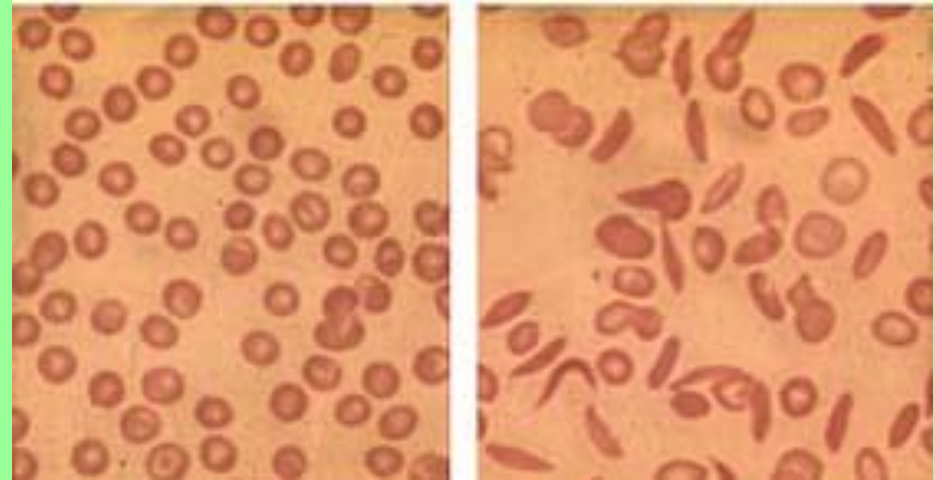
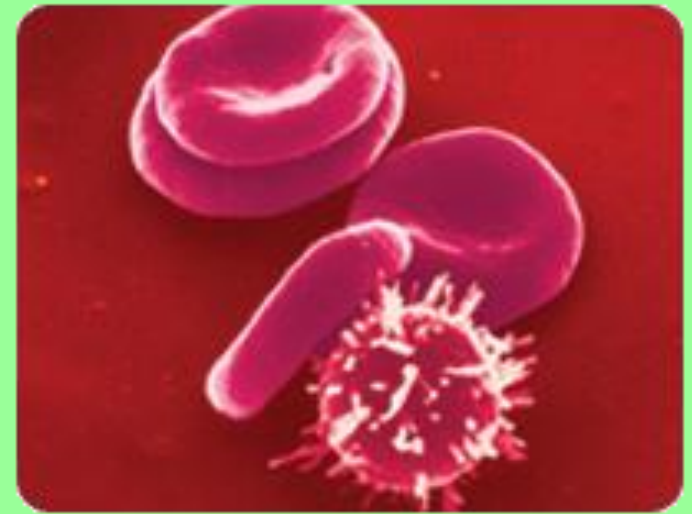
A hematoma is formed when a mass of blood outside the blood vessels is confined and usually clotted within an organ or space within the body. It is commonly known as a bruise or contusion, and is usually the result of an injury or disease.



Diseases and disorders of the blood and lymphatic system...

Hemoglobinopathy (HEE moh gloh bin AH path ee)

Hemoglobinopathy is a disease that affects the hemoglobin or protein within the red blood cells. Sickle cell anemia that particularly affects the African-American community, is a form of hemoglobinopathy.



Sickle cell anemia on the right

Diseases and disorders of the blood and lymphatic system...

Hemorrhagic Fever

(Hem or AJ ik)

This is an infectious and often life-threatening disease causing internal bleeding and high fevers. Viruses, including ebola, often cause this disease.



Diseases and disorders of the blood and lymphatic system...

Hemophilia

(HEE moh FILL ee ah)

Hemophilia is an inherited disorder.

There is an absence of blood-clotting proteins that are necessary for coagulation. The hemophiliac may experience abnormal blood losses even after minor injuries.



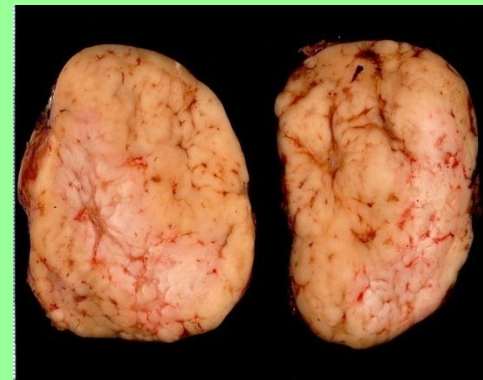
Treatment involves replacement of the blood protein *factor*. The factor enables the blood to clot.

Diseases and disorders of the blood and lymphatic system...

Hodgkin's Disease

Named after the physician who discovered it, Hodgkin's Disease is a malignant form of cancer of lymphatic tissue (lymphoma) characterized by the progressive enlargement of the lymph nodes, fatigue, and deficiency of the immune response.

This form of cancer appears to be more sensitive to radiation than other non-Hodgkin's lymphomas.



Left node normal.
Node on the right from Hodgkin's patient.

Diseases and disorders of the blood and lymphatic system...

Immunodeficiency

(IM yoo noh dee FISH ehn see)

This condition occurs when there are an insufficient number of white blood cells, called lymphocytes, available to fight infection in the body. A patient suffering from immunodeficiency is referred to as 'immunocompromised'.



This is the result of giving a childhood vaccination to a child with an immunodeficiency. It progressed, and was fatal.

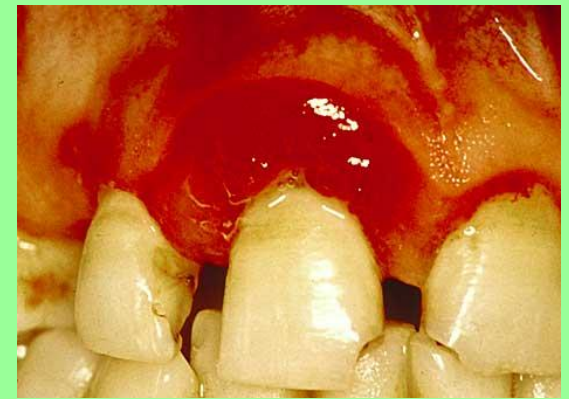
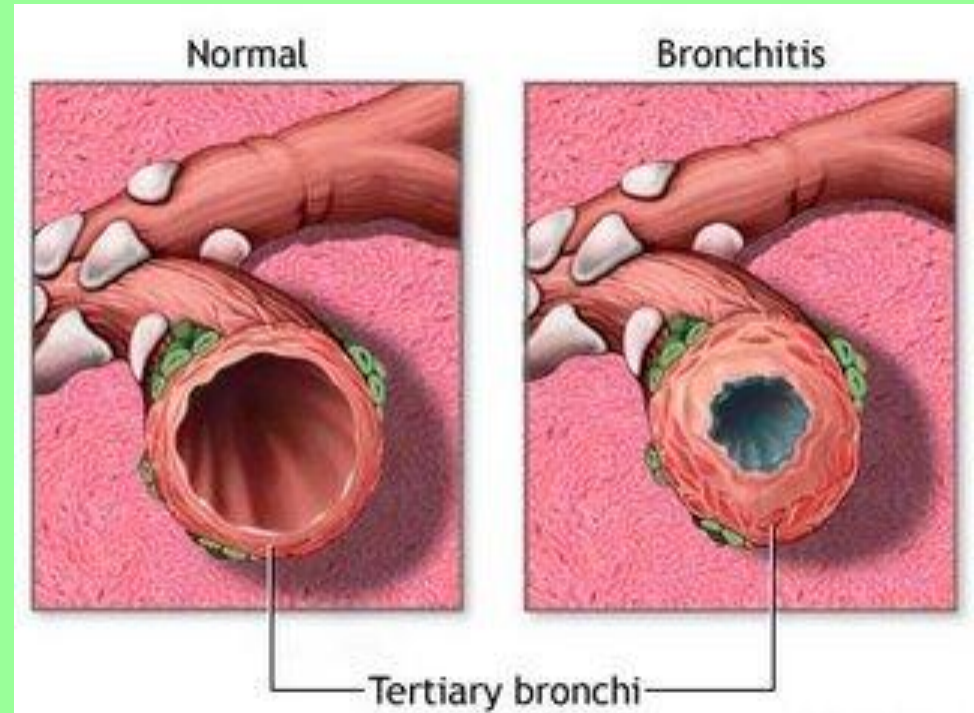
Diseases and disorders of the blood and lymphatic system...

Inflammation

(in flah MAY shun)

This is an nonconstructed term derived from the Latin *inflammatio* which means 'to set ablaze'.

Symptoms of inflammation may be edema, redness, heat, and pain.

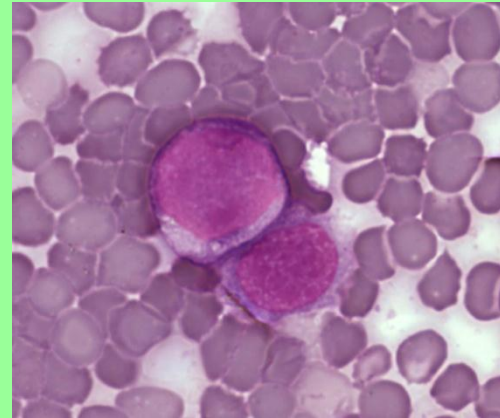


Diseases and disorders of the blood and lymphatic system...

Leukemia

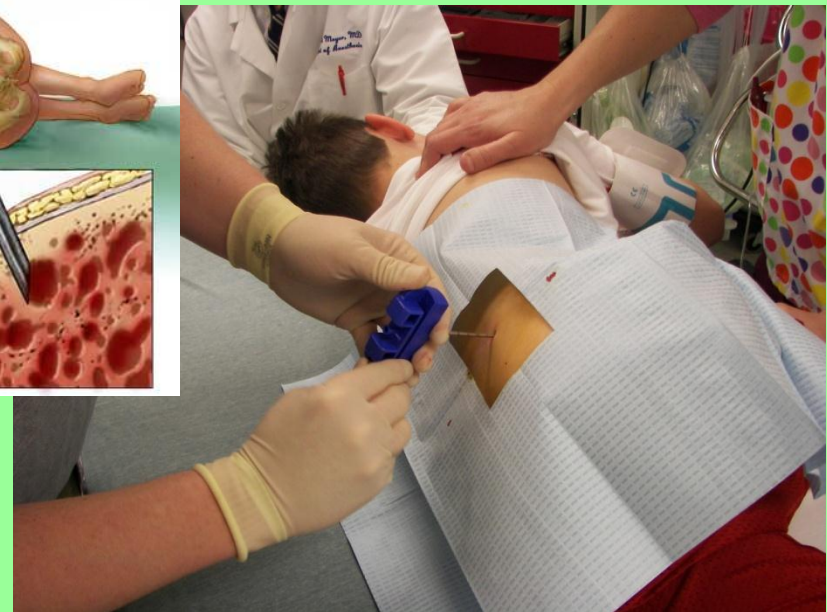
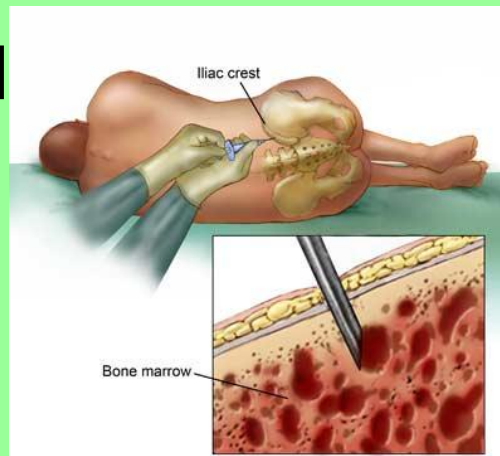
(loo KEE mee ah)

This is a cancer that forms in the red, marrow found inside bones. It produces abnormal white blood cells, so immunodeficiency is a symptom.



Leukemia cells
among normal
← cells

Performing a
bone marrow
biopsy ↓



Diseases and disorders of the blood and lymphatic system...

Malaria

(mah LAIR ee ah)

Malaria is caused by a parasitic protozoa form of bacteria, carried by mosquitoes. The word means *bad air*. It infects the red blood cells and liver, causing periodic flare-ups of high fever.



Red blood cells bursting after malaria infection

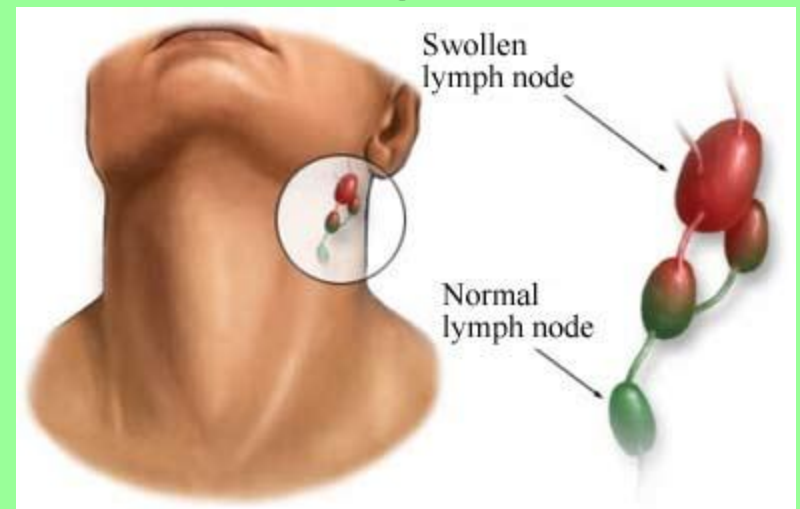
Diseases and disorders of the blood and lymphatic system...

Mononucleosis

(MAHN oh nook lee OH siss)

This disease is caused by a virus and characterized by enlarged lymph nodes and spleen, atypical lymphocytes, throat pain, fever, and fatigue. The communicable form of the disease is caused by the Epstein-Barr virus.

The communicable form of the disease is commonly called the kissing disease.



Diseases and disorders of the blood and lymphatic system...

Necrosis

(neh KROH sis)

Necrosis is the death of one or more cells or an entire portion of a tissue or organ. It is an nonconstructed term derived from the Greek word 'nekrosis', meaning death.

The dead tissue is called *necrotic*. Necrosis may be the result of an injury, frostbite, or lack of circulation.



Diseases and disorders of the blood and lymphatic system...

Septicemia

(sep tih SEE mee ah)

This disease is caused by the presence of bacteria and their toxins in the circulating blood of the body. The Latin form of this word is *sepsis*; the person suffering from this condition is called *septic*.



Commonly called blood poisoning

Diseases and disorders of the blood and lymphatic system...

Thrombosis

(throm BOH siss)

A thrombosis is the formation or presence of one or more blood clots.

These clots may partially or completely block an artery or vein.

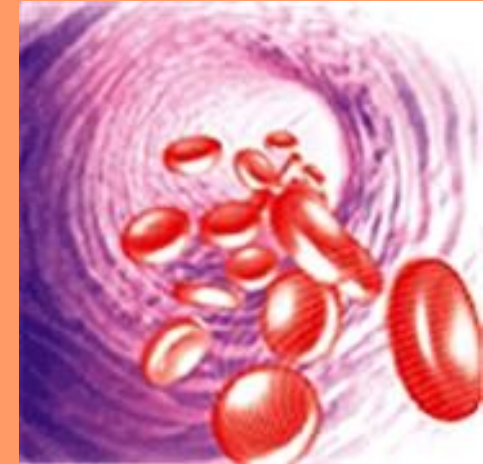


Treatments and Procedures of the blood and lymphatic system...

Anticoagulant

(AN tye koh AG yoo lant)

An anticoagulant is a chemical agent that delays or prevents the clotting of blood, and may be used to dissolve existing blood clots or reduce the chances of forming clots. A common anticoagulant agent is warfarin, marketed as the drug Coumadin.



The patient on blood thinners should wear a medic alert bracelet

Treatments and Procedures of the blood and lymphatic system...

Attenuation

(ah TEN yoo AY shun)

This is a process that weakens a pathogen, making it less infectious.

It is used on pathogens prior to their incorporation into a vaccine preparation, which will be used to provide immunity to the full-strength disease-causing pathogens.



The live polio and nasal flu spray vaccines have undergone *attenuation*.

Treatments and Procedures of the blood and lymphatic system...

Transfusion

(trans FYOO zhun)

A transfusion is the process of introducing blood to the body to restore blood volume to normal levels.

Homologous

(hoh MALL oh gus) transfusions involve blood voluntarily donated by others.



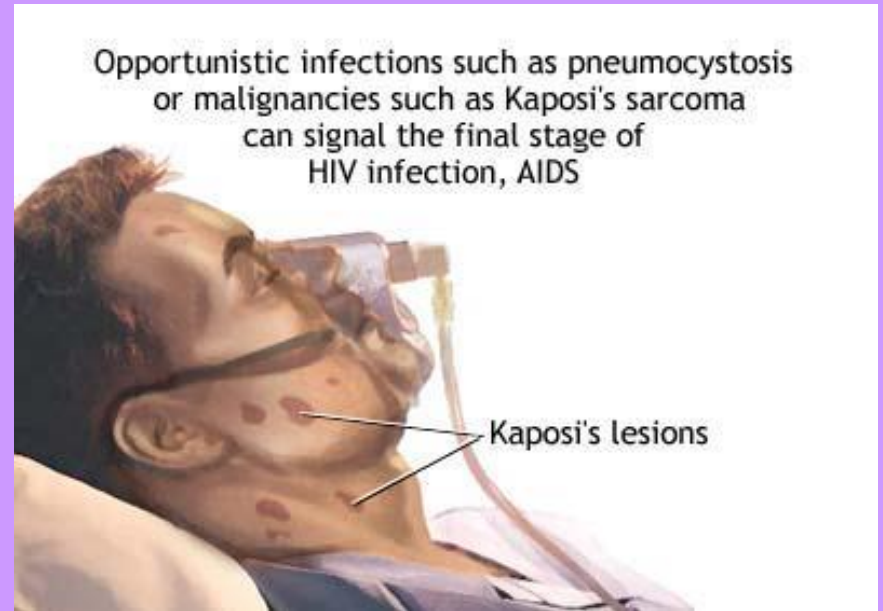
Autologous (aw TALL oh guss) transfusions involve blood donated by a patient for their personal use.

Abbreviations associated with the blood and lymphatic system...

AIDS

Acquired Immunodeficiency Syndrome

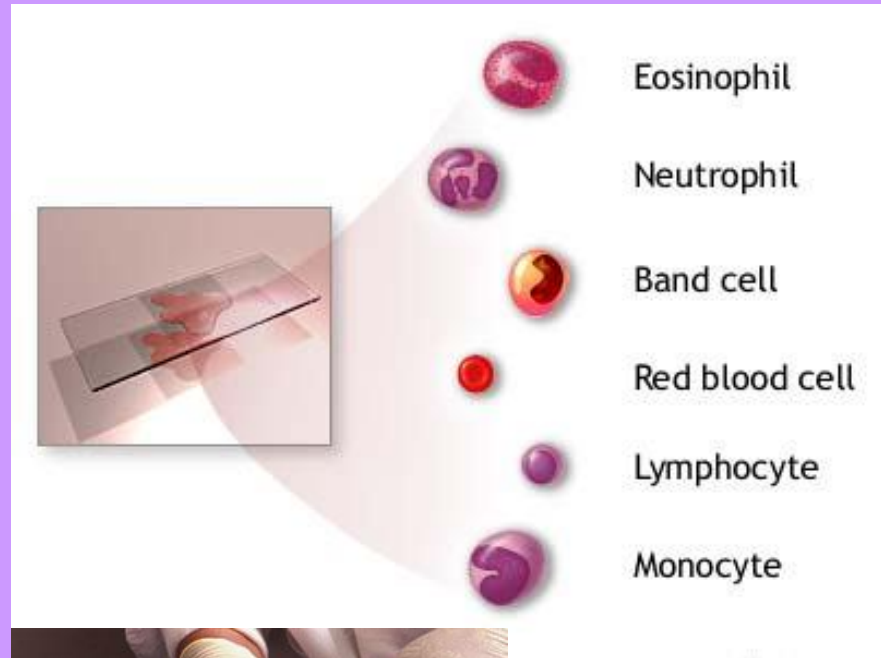
A disease caused by the human immunodeficiency virus (HIV), it destroys the white blood cells known as the helper T cells. This destroys the immune response.



Abbreviations associated with the blood and lymphatic system...

CBC Complete Blood Count

A complete blood count is a common laboratory test that evaluates a sample of blood and provides diagnostic information about a patient's general health. It always includes a RBC, or count of red blood cells, and a WBC, the count of white blood cells.

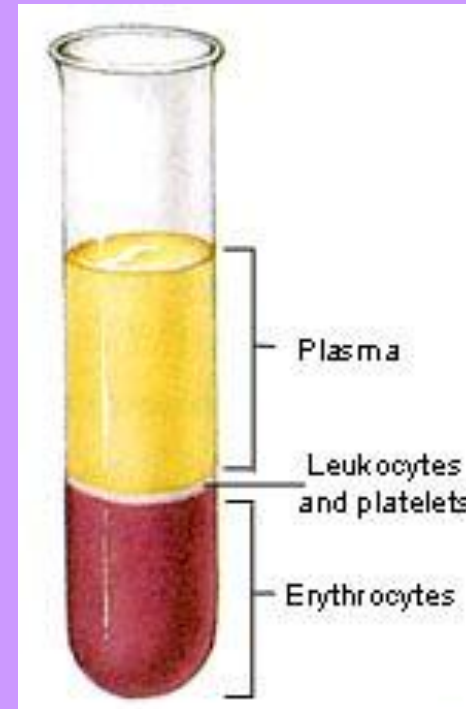


Abbreviations associated with the blood and lymphatic system...

HCT or Hct Hematocrit

(hee MAT oh krit)

A hematocrit is often part of the CBC and is obtained by using a centrifuge to separate a sample of blood into separate cells. It then measures the *percentage* of red blood cells in the sample.

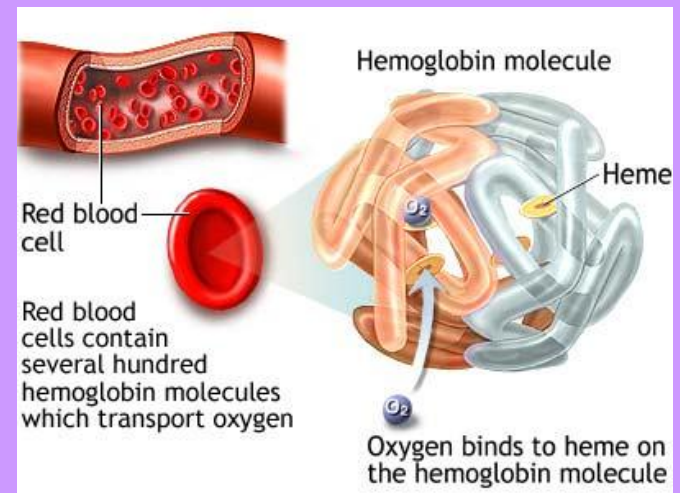
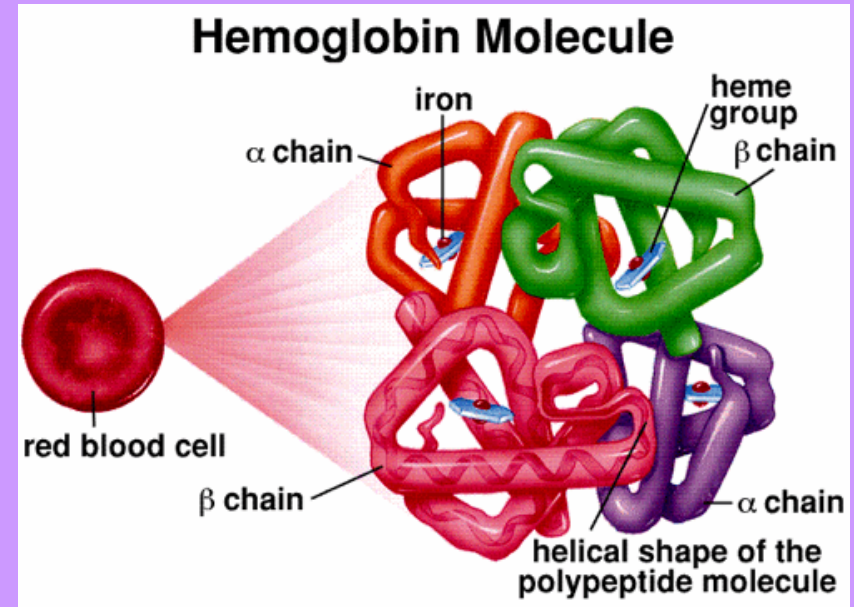


Abbreviations associated with the blood and lymphatic system...

HGB

Hemoglobin (HEE moh gloh binn)

Hemoglobin is the globular-shaped protein molecules found inside the red blood cells. The globular structure is capable of carrying oxygen throughout the body.

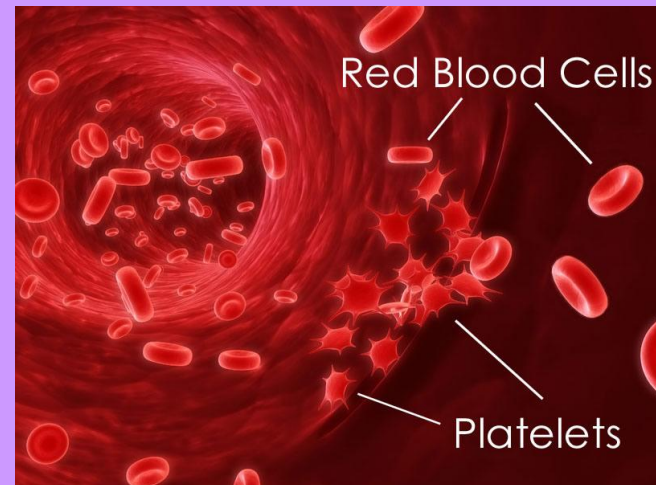
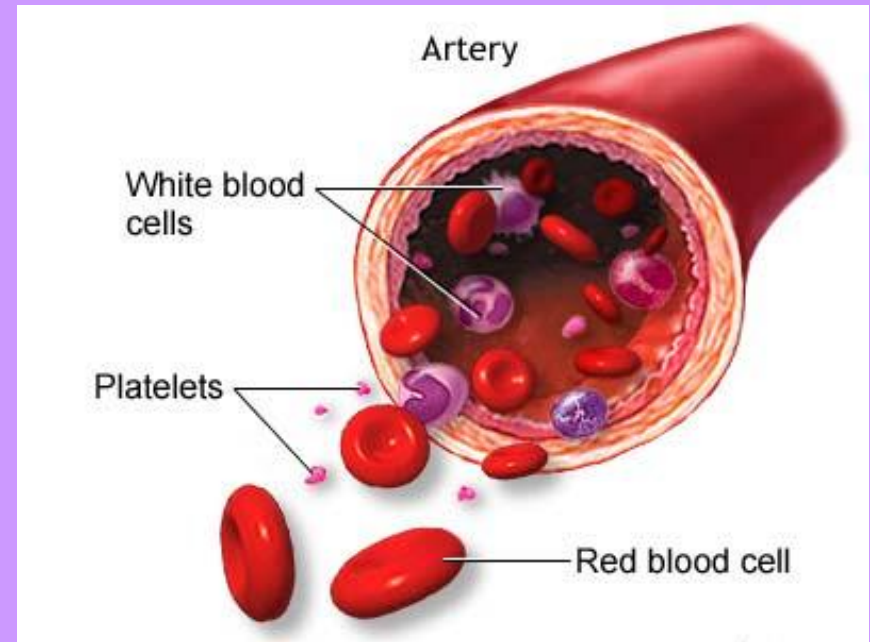


Abbreviations associated with the blood and lymphatic system...

PLT

Platelet Count

This is a laboratory procedure that calculates the number of platelets in a known volume of blood. A reduced platelet count suggests a failure of hemostasis (HEE moh STAY siss)... or the ability of blood to coagulate.



MEDICAL TERMINOLOGY

THE END

PART 1

BLOOD & LYMPHATIC SYSTEM

